''OVERPACK'' marking must be at least 12 mm (0.5 inches) high.

(i) *Transitional exception.* A marking in conformance with the requirements of this paragraph in effect on December 31, 2014, may continue to be used until December 31, 2016.

(ii) For domestic transportation, an overpack marked prior to January 1, 2017 and in conformance with the requirements of this paragraph in effect on December 31, 2014, may continue in service until the end of its useful life.

(5) Packages containing Class 8 (corrosive) materials in Packing Group I or Division 5.1 (oxidizing) materials in Packing Group I may not be overpacked with any other materials.

(6) For limited quantities and ORM material, the overpack is marked with a limited quantity marking prescribed in §172.315 of this subchapter or, the ORM marking prescribed in §172.316 of this subchapter, unless a limited quantity or ORM marking representative of the hazardous material in the overpack is visible.

(7) For excepted quantities, the overpack is marked with the required marking of §173.4a of this part unless visible.

(b) Shrink-wrapped or stretch-wrapped trays may be used as outer packagings for inner packagings prepared in accordance with the limited quantity provisions or consumer commodity provisions of this subchapter, provided that—

(1) Inner packagings are not fragile, liable to break or be easily punctured, such as those made of glass, porcelain, stoneware or certain plastics; and

(2) Each complete package does not exceed 20 kg (44 lbs) gross weight.

(c) Hazardous materials which are required to be labeled POISON may be transported in the same motor vehicle with material that is marked or known to be foodstuffs, feed or any edible material intended for consumption by humans or animals provided the hazardous material is marked, labeled, and packaged in accordance with this subchapter, conforms to the requirements of paragraph (a) of this section and is overpacked as specified in §177.841(e) of this subchapter or in an overpack which is a UN 1A2, 1B2, or 1N2 drum tested and marked for a Packing Group II or higher performance level.

[Amdt. 173–165, 48 FR 28099, June 20, 1983]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §173.25, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov*.

### §173.26 Quantity limitations.

When quantity limitations do not appear in the packaging requirements of this subchapter, the permitted gross weight or capacity authorized for a packaging is as shown in the packaging specification or standard in part 178 or 179, as applicable, of this subchapter.

[Amdt. 173–224, 55 FR 52612, Dec. 21, 1990]

### §173.27 General requirements for transportation by aircraft.

(a) The requirements of this section are in addition to requirements prescribed elsewhere under this part and apply to packages offered or intended for transportation aboard aircraft. Except for materials not subject to performance packaging requirements in subpart E of this part, a packaging containing a Packing Group III material with a primary or subsidiary risk of Division 4.1, 4.2, 4.3, 5.1, or Class 8 must meet the Packing Group II performance level when offered for transportation by aircraft.

(b) *Packages authorized onboard aircraft.* (1) When Column 9a of the §172.101 table indicates that a material is ''Forbidden'', that material may not be offered for transportation or transported aboard passenger-carrying aircraft.

(2) When Column 9b of the §172.101 table indicates that a material is ''Forbidden'', that material may not be offered for transportation or transported aboard aircraft.

(3) The maximum quantity of hazardous material in a package that may be offered for transportation or transported aboard a passenger-carrying aircraft or cargo aircraft may not exceed that quantity prescribed for the material in Column 9a or 9b, respectively, of the §172.101 table.

(4) A package containing a hazardous material which is authorized aboard cargo aircraft but not aboard passenger

aircraft must be labeled with the CARGO AIRCRAFT ONLY label required by §172.402(c) of this subchapter and may not be offered for transportation or transported aboard passenger-carrying aircraft.

(c) *Pressure requirements.* (1) Packagings must be designed and constructed to prevent leakage that may be caused by changes in altitude and temperature during transportation aboard aircraft.

(2) Packagings for which retention of liquid is a basic function must be capable of withstanding without leakage the greater of—

(i) An internal pressure which produces a gauge pressure of not less than 75 kPa (11 psig) for liquids in Packing Group III of Class 3 or Division 6.1; or 95 kPa (14 psig) for other liquids; or

(ii) A pressure related to the vapor pressure of the liquid to be conveyed, determined by one of the following:

(A) The total gauge pressure measured in the receptacle (i.e., the vapor pressure of the material and the partial pressure of air or other inert gases, less 100 kPa (15 psia)) at 55 °C (131 °F), multiplied by a safety factor of 1.5; determined on the basis of a filling temperature of 15 °C (59 °F) and a degree of filling such that the receptacle is not completely liquid full at a temperature of 55 °C (131 °F) or less;

(B) 1.75 times the vapor pressure at 50 °C (122 °F) less 100 kPa (15 psia); or

(C) 1.5 times the vapor pressure at 55 °C (131 °) less 100 kPa (15 psia).

(3) Notwithstanding the provisions of paragraph (c)(2) of this section—

(i) Hazardous materials may be contained in an inner packaging which does not itself meet the pressure requirement provided that the inner packaging is packed within a supplementary packaging which does meet the pressure requirement and other applicable packaging requirements of this subchapter.

(ii) Packagings which are subject to the hydrostatic pressure test and marking requirements of §§178.605 and 178.503(a)(5), respectively, of this subchapter must have a marked test pressure of not less than 250 kPa (36 psig) for liquids in Packing Group I, 80 kPa (12 psig) for liquids in Packing Group III of Class 3 or Division 6.1, and 100 kPa (15 psig) for other liquids.

(d) *Closures.* The body and closure of any packaging must be constructed to be able to adequately resist the effects of temperature and vibration occurring in conditions normally incident to air transportation. Inner packaging or receptacle closures of combination packages containing liquids must be held securely, tightly and effectively in place by secondary means. Examples of such secondary methods include: Adhesive tape, friction sleeves, welding or soldering, locking wires, locking rings, induction heat seals, and child-resistant closures. The closure device must be designed so that it is unlikely that it can be incorrectly or incompletely closed. Closures must be as follows:

(1) *Packing Group I.* An inner packaging containing liquids of Packing Group I must have a secondary means of closure applied and packed in accordance with paragraph (e) of this section.

(2) *Packing Groups II and III.* When a secondary means of closure cannot be applied or is impracticable to apply to an inner packaging containing liquids of Packing Groups II and III, this requirement may be satisfied by securely closing the inner packaging and placing it in a leakproof liner or bag before placing the inner packaging in its outer packaging.

(e) *Absorbent materials.* Except as otherwise provided in this subchapter, Packing Group I liquid hazardous materials of Classes 3, 4, or 8, or Divisions 5.1 or 6.1 that are packaged in combination packagings and offered for air transport in glass, earthenware, plastic, or metal inner packagings must be packed using absorbent material as follows:

(1) Inner packagings must be packed in a rigid and leakproof receptacle or intermediate packaging containing sufficient absorbent material to absorb the entire contents of the inner packaging before packing the inner packaging in its outer package.

(2) Absorbent material must not react dangerously with the liquid (see §§173.24 and 173.24a.).

(f) *Combination packagings*—(1) *Excepted quantities.* For authorized materials and inner and outer package

quantity limits for combination packages of *excepted quantities* intended for transportation by aircraft, *see* §173.4a of this part. Unless otherwise specified in this part, or in Subpart C of part 171 of this subchapter, when combination packagings are intended for transportation aboard an aircraft, inner packagings must conform to the quantity limitations set forth in table 1 of this paragraph for transport aboard passenger-carrying aircraft and table 2 of this paragraph for transport aboard cargo-only aircraft.

(2) *Limited quantities.* (i) Unless otherwise specified in this part, or in subpart C of part 171 of this subchapter, when a limited quantity of hazardous material packaged in a combination packaging is intended for transportation aboard an aircraft, the inner and outer packagings must conform to the quantity limitations set forth in Table 3 of this paragraph (f). Materials and articles must be authorized for transportation aboard a passenger-carrying aircraft (see Column (9A) of the §172.101 Hazardous Materials Table of this subchapter). Not all unauthorized materials or articles may be indicated in this table. For mixed content packages of limited quantity material, the total net quantity must not exceed the lowest permitted maximum net quantity (for each of the hazard classes or divisions represented in the package) per outer package set forth in Table 3 of this paragraph (f). The permitted maximum net quantity must be calculated in kilograms for a package that contains both a solid and a liquid. Unless otherwise excepted, packages must be marked and labeled in accordance with this section and any additional requirements in subparts D and E, respectively, of part 172 of this subchapter. Materials or articles not authorized as limited quantity by aircraft are:

(A) Those in Packing Group I;

(B) Class 1 (explosive) material (see §173.63(b) of this part for exceptions provided to certain articles of Division 1.4S) and Class 7 (radioactive) material (see §§173.421 through 173.425 of this part, as applicable, for exceptions provided to certain substances, instruments or articles of Class 7);

(C) Divisions 2.1 (flammable gas) (*except* Aerosols (UN1950) and Receptacles, small (UN2037) without subsidiary risk) and Division 2.3 (toxic gas);

(D) Divisions 4.1 (self-reactive), 4.2 (spontaneously combustible) (primary or subsidiary risk), and 4.3 (dangerous when wet) (liquids);

(E) Division 5.2 (organic peroxide) (*except* when contained in a Chemical or First aid kit (UN3316) or Polyester resin kit (UN3269) (Types D, E and F non-temperature controlled only));

(F) Class 8 (corrosive) materials UN2794, UN2795, UN2803, UN2809, UN3028, UN3506; and

(G) All Class 9 (miscellaneous) materials *except for* UN1941, UN1990, UN2071, UN3077, UN3082, UN3316, UN3334, UN3335, and ID8000.

(ii) Effective January 1, 2012, packages must be marked with the limited quantity ''Y'' mark as prescribed in §172.315 of this part when conforming to Table 3 of this paragraph. Until December 31, 2012, a package may instead be marked with the proper shipping name ''Consumer commodity'' and ''ORM–D–AIR'' (including ''Charcoal, NA1361) if it contains a consumer commodity, as authorized by this subchapter in effect on October 1, 2010.

(iii) Strong outer packagings are required and a completed package may not exceed 30 kg (66 lbs) gross weight.

(iv) A secondary means of closure required for all liquids contained in inner packagings. If this requirement cannot be satisfied, the use of an intermediate and leakproof form of containment, such as a liner, is required.

(v) Packages must be capable of passing a 1.2 m drop test on to a rigid, nonresilient, flat and horizontal surface, in the position most likely to cause damage. The criteria for passing the test is that the outer packaging must not exhibit any damage affecting safety in transport and there must be no leakage from the inner packagings.

(vi) Each package must be capable of withstanding, without breakage or leakage of any inner packaging, a force applied to the top surface for a duration of 24 hours equivalent to the total weight of identical packages if stacked to a height of 3 m (including the test sample).

(vii) Except for UN3082, inner packagings of combination packagings containing liquids must be capable of passing the appropriate pressure differential test prescribed in paragraph (c) of this section.

(3) The tables are as follows:

TABLE 1—MAXIMUM NET CAPACITY OF INNER PACKAGING FOR TRANSPORTATION ON PASSENGER-CARRYING AIRCRAFT

| Maximum net quantity per package from Column 9a of the § 172.101 table | Maximum authorized net capacity *of each inner packaging* | |
|---|---|---|
| | Glass, earthenware or fiber inner packagings | Metal or plastic inner packagings |
| Liquids: | | |
| Not greater than 0.5L | 0.5L | 0.5L. |
| Greater than 0.5L. not greater than lL | 0.5L | lL. |
| Greater than 1L, not greater than 5L | 1L | 5L. |
| Greater than 5L, not greater than 60L | 2.5L | 10L. |
| Greater than 60L, not greater than 220L | 5L | 25L. |
| Greater than 220L | No limit | No limit. |
| Solids: | | |
| Not greater than 5 kg | 0.5 kg | 1 kg. |
| Greater than 5 kg, not greater than 25 kg | 1 kg | 2.5 kg. |
| Greater than 25 kg, not greater than 200 kg | 5 kg | 10 kg. |
| Greater than 200 kg | No limit | No limit. |

TABLE 2—MAXIMUM NET CAPACITY OF INNER PACKAGING FOR TRANSPORTATION ON CARGO AIRCRAFT

| Maximum net quantity per package from Column 9b of the § 172.101 table | Maximum authorized net capacity *of each inner packaging* | |
|---|---|---|
| | Glass, earthenware or fiber inner packagings | Metal or plastic inner packagings |
| Liquids: | | |
| Not greater than 2.5L | 1L | 1L. |
| Greater than 2.5L, not greater than 30L | 2.5L | 2.5L. |
| Greater than 30L, not greater than 60L | 5L | 10L. |
| Greater than 60L, not greater than 220L | 5L | 25L. |
| Greater than 220L | No limit | No limit. |
| Solids: | | |
| Not greater than 15 kg | 1 kg | 2.5 kg. |
| Greater than 15 kg, not greater than 50 kg | 2.5 kg | 5 kg. |
| Greater than 50 kg, not greater than 200 kg | 5 kg | 10 kg. |
| Greater than 200 kg | No limit | No limit. |

TABLE 3—MAXIMUM NET QUANTITY OF EACH INNER AND OUTER PACKAGING FOR MATERIALS AUTHORIZED FOR TRANSPORTATION AS LIMITED QUANTITY BY AIRCRAFT

| Hazard class or division | Maximum authorized net quantity *of each inner packaging* | | Maximum authorized net quantity *of each outer package* | Notes |
|---|---|---|---|---|
| | Glass, earthenware or fiber inner packagings | Metal or plastic inner packagings | | |
| Class 1 | Forbidden (See note). | | | See § 173.63(b) of this part for exceptions provided to certain articles of Division 1.4S. |
| Class 2 | | | 30 kg Gross | *Authorized materials:* Aerosols (UN1950) in Divisions 2.1 and 2.2, and Receptacles, small (UN2037) in Divisions 2.1 and 2.2 without subsidiary risk and Fuel cells cartridges (UN3478, UN3479), see § 173.230 of this part. |
| Class 3 | PG I: Forbidden. | | | |

TABLE 3—MAXIMUM NET QUANTITY OF EACH INNER AND OUTER PACKAGING FOR MATERIALS AUTHORIZED FOR TRANSPORTATION AS LIMITED QUANTITY BY AIRCRAFT—Continued

| Hazard class or division | Maximum authorized net quantity *of each inner packaging* | | Maximum authorized net quantity *of each outer package* | Notes |
|---|---|---|---|---|
| | Glass, earthenware or fiber inner packagings | Metal or plastic inner packagings | | |
| | PG II: 0.5L ..... | PG II: 0.5L ..... | PG II: 1L* ..... | *Maximum net quantity per outer package with corrosive subsidiary risk (e.g., UN2924, UN3286) is 0.5L. For Class 3 base materials as part of a Polyester resin kit (UN3269), see §173.165 of this part for additional requirements, as applicable. Inner packaging limit for UN3269 base material is 1.0 L. For Fuel cell cartridges *containing flammable liquids* (UN3473), see §173.230 of this part. |
| | PG III: 2.5L* ..... *Corrosive subsidiary risk (e.g., UN2924) or toxic (e.g., UN1992) is 1L. | PG III: 5.0L* ..... *Corrosive subsidiary risk (e.g., UN2924) or toxic (e.g., UN1992) is 1L. | PG III: 10L* ..... | *Maximum net quantity per outer package with corrosive subsidiary risk (e.g., UN2924) is 1L and toxic subsidiary risk (e.g., UN1992) is 2L. For Class 3 base materials as part of a Polyester resin kit (UN3269), see §173.165 of this part for additional requirements, as applicable. Inner packaging limit for UN3269 base material is 1.0 L. |
| Division 4.1 (does not include self-reactive material). | PG I: Forbidden. | | | |
| | PG II: 0.5 kg ..... | PG II: 0.5 kg ..... | PG II: 5 kg* ..... | *Maximum net quantity per outer package with toxic subsidiary risk (e.g., UN3179) is 1 kg. |
| | PG III: 1 kg ..... | PG III: 1 kg ..... | PG III: 10 kg* ..... | *Maximum net quantity per outer package with corrosive subsidiary risk (e.g., UN3180) is 5 kg. |
| Division 4.2 (Primary or subsidiary). | Forbidden* ..... | ..... | 25 kg (net mass)* | *Until December 31, 2012, Charcoal (NA1361), PG III, may be transported as a limited quantity and may be renamed Consumer commodity and reclassed ORM-D-AIR, if eligible. |
| Division 4.3 (solid material only). | PG I solids and all liquids regardless of Packing Group: Forbidden. | | | |
| | PG II: 0.5 kg ..... | PG II: 0.5 kg ..... | PG II: 5 kg* ..... | *Maximum net quantity per outer package with toxic subsidiary risk (e.g., UN3134) is 1 kg. For fuel cell cartridges *containing water reactive substances* (UN3476), see §173.230 of this part. |
| | PG III: 1 kg ..... | PG III: 1 kg ..... | PG III: 10 kg* ..... | *Maximum net quantity per outer package with corrosive or flammable subsidiary risk (e.g., UN3131 or UN3132, respectively) is 5 kg. |
| Division 5.1 (Liquid or solid material). | PG I: Forbidden. | | | |
| Division 5.1 (liquid material). | PG II: 0.1L ..... | PG II: 0.1L ..... | PG II: 0.5L. | |
| | PG III: 0.5L ..... | PG III: 0.5L ..... | PG III: 1.0L. | |
| Division 5.1 (solid material). | PG II: 0.5 kg ..... | PG II: 0.5 kg ..... | PG II: 2.5 kg* ..... | *Maximum net quantity per outer package with toxic subsidiary risk (e.g., UN3087) is 1 kg. |
| | PG III: 1.0 kg ..... | PG III: 1.0 kg ..... | PG III: 10 kg* ..... | *Maximum net quantity per outer package with corrosive subsidiary risk (e.g., UN3085) is 1 kg. |

TABLE 3—MAXIMUM NET QUANTITY OF EACH INNER AND OUTER PACKAGING FOR MATERIALS AUTHORIZED FOR TRANSPORTATION AS LIMITED QUANTITY BY AIRCRAFT—Continued

| Hazard class or division | Maximum authorized net quantity *of each inner packaging* | | Maximum authorized net quantity *of each outer package* | Notes |
|---|---|---|---|---|
| | Glass, earthenware or fiber inner packagings | Metal or plastic inner packagings | | |
| Division 5.2 (liquid material). | 30 mL | 30 mL | 1 kg | *Authorized materials:* Types D, E and F are authorized only as part of a Chemical or First aid kit (UN3316) packaged in accordance with § 173.161 of this part or a Polyester resin kit (UN3269) packaged in accordance with § 173.165 of this part. See §§ 173.161 and 173.165, as applicable, for additional requirements. |
| Division 5.2 (solid material). | 100g | 100g | 1 kg | Solid activators of Types D, E and F are limited to 100 g per inner packaging for UN3316 and UN3269. See §§ 173.161 and 173.165, as applicable, for additional requirements. |
| Division 6.1 | PG I (Inhalation or otherwise): Forbidden. | | | |
| Division 6.1 (liquid material). | PG II: 0.1L | PG II: 0.1L | PG II: 1.0L* | *Maximum net quantity per outer package with corrosive subsidiary risk (e.g., UN3289) is 0.5L. |
| | PG III: 0.5L | PG III: 0.5L | PG III: 2.0L. | |
| Division 6.1 (solid material). | PG II: 0.5 kg | PG II: 0.5 kg | PG II: 1.0 kg. | |
| | PG III: 1.0 kg | PG III: 1.0 kg | PG III: 10 kg. | |
| Class 7 | Forbidden (See note). | | | See §§ 173.421 through 173.425 of this part, as applicable, for exceptions provided to certain substances, instruments or articles of Class 7. |
| Class 8 | PG I: Forbidden. | | | |
| Class 8 (liquid material). | PG II: 0.1L | PG II: 0.1L | PG II: 0.5L | For "Fuel cell cartridges *containing corrosive substances"* (UN3477), see § 173.230 of this part. |
| | PG III: 0.5L | PG III: 0.5L | PG III: 1.0L. | |
| Class 8 (solid material). | PG II: 0.5 kg | PG II: 0.5 kg | PG II: 5.0 kg* | *Maximum net quantity per outer package for UN2430 is 1.0 kg. UN2794, UN2795, UN2803, UN2809, UN3028 are not authorized as limited quantity. |
| | PG III: 1.0 kg | PG III: 1.0 kg | PG III: 5.0 kg. | |
| Class 9 (liquid material). | 30 mL (UN3316); 5.0L (UN1941, UN1990, UN3082, UN3334). | 30 mL (UN3316); 5.0L (UN1941, UN1990, UN3082, UN3334). | 1 kg (UN3316); 30 kg gross (all other authorized Class 9 material). | *Authorized materials:* UN1941, UN1990, UN2071, UN3077, UN3082, UN3334, and UN3335. Additionally, Consumer commodity (ID8000) in accordance with § 173.167 of this part and Chemical kit or First aid kit (UN3316) in accordance with § 173.161 of this part are authorized. |
| Class 9 (solid material). | 100 g (UN3316); 5.0 kg (UN2071, UN3077, UN3335). | 100 g (UN3316); 5.0 kg (UN2071, UN3077, UN3335). | 1 kg (UN3316); 30 kg gross (all other authorized Class 9 material). | |

(g) *Cylinders.* For any cylinder containing hazardous materials and incorporating valves, sufficient protection must be provided to prevent operation of, and damage to, the valves during transportation, by one of the following methods:

(1) By equipping each cylinder with securely attached valve caps or protective headrings; or

(2) By boxing or crating the cylinder.

(h) Tank cars and cargo tanks. Any tank car or cargo tank containing a hazardous material may not be transported aboard aircraft.

(i) Effective October 1, 2006, each person who offers a hazardous material for transportation by aircraft must include the certification statement specified in §172.204(c)(3).

[Amdt. 173–224, 55 FR 52612, Dec. 21, 1990, as amended at 56 FR 66266, Dec. 20, 1991; Amdt. 173–138, 59 FR 49133, Sept. 26, 1994; 65 FR 58629, Sept. 29, 2000; 66 FR 45380, Aug. 28, 2001; 68 FR 45032, July 31, 2003; 69 FR 76155, Dec. 20, 2004; 71 FR 14602, Mar. 22, 2006; 73 FR 57006, Oct. 1, 2008; 75 FR 53597, Sept. 1, 2010; 76 FR 3368, Jan. 19, 2011; 76 FR 82175, Dec. 30, 2011; 77 FR 22509, Apr. 16, 2012; 78 FR 65479, Oct. 31, 2013; 81 FR 35541, June 2, 2016]

### § 173.28 Reuse, reconditioning and remanufacture of packagings.

(a) *General.* Packagings and receptacles used more than once must be in such condition, including closure devices and cushioning materials, that they conform in all respects to the prescribed requirements of this subchapter. Before reuse, each packaging must be inspected and may not be reused unless free from incompatible residue, rupture, or other damage which reduces its structural integrity. Packagings not meeting the minimum thickness requirements prescribed in paragraph (b)(4)(i) of this section may not be reused or reconditioned for reuse.

(b) *Reuse of non-bulk packaging.* A non-bulk packaging used more than once must conform to the following provisions and limitations:

(1) A non-bulk packaging which, upon inspection, shows evidence of a reduction in integrity may not be reused unless it is reconditioned in accordance with paragraph (c) of this section.

(2) Before reuse, packagings subject to the leakproofness test with air prescribed in §178.604 of this subchapter shall be—

(i) Retested without failure in accordance with §178.604 of this subchapter using an internal air pressure (gauge) of at least 48 kPa (7.0 psig) for Packing Group I and 20 kPa (3.0 psig) for Packing Group II and Packing Group III; and

(ii) Marked with the letter ''L'', with the name and address or symbol of the person conducting the test, and the last two digits of the year the test was conducted. Symbols, if used, must be registered with the Associate Administrator.

(3) Packagings made of paper (other than fiberboard), plastic film, or textile are not authorized for reuse;

(4) Metal and plastic drums and jerricans used as single packagings or the outer packagings of composite packagings are authorized for reuse only when they are marked in a permanent manner (e.g., embossed) in mm with the nominal (for metal packagings) or minimum (for plastic packagings) thickness of the packaging material, as required by §178.503(a)(9) of this subchapter, and—

(i) Except as provided in paragraph (b)(4)(ii) of this section, conform to the following minimum thickness criteria:

| Maximum capacity not over | Minimum thickness of packaging material | |
|---|---|---|
| | Metal drum or jerrican | Plastic drum or jerrican |
| 20 L ..... | 0.63 mm (0.025 inch) | 1.1 mm (0.043 inch). |
| 30 L ..... | 0.73 mm (0.029 inch) | 1.1 mm (0.043 inch). |
| 40 L ..... | 0.73 mm (0.029 inch) | 1.8 mm (0.071 inch). |
| 60 L ..... | 0.92 mm (0.036 inch) | 1.8 mm (0.071 inch). |
| 120 L ..... | 0.92 mm (0.036 inch) | 2.2 mm (0.087 inch). |
| 220 L ..... | 0.92 mm (0.036 inch)[1]. | 2.2 mm (0.087 inch). |
| 450 L ..... | 1.77 mm (0.070 inch) | 5.0 mm (0.197 inch). |

[1] Metal drums or jerricans with a minimum thickness of 0.82 mm body and 1.09 mm heads which are manufactured and marked prior to January 1, 1997 may be reused. Metal drums or jerricans manufactured and marked on or after January 1, 1997, and intended for reuse, must be constructed with a minimum thickness of 0.82 mm body and 1.11 mm heads.

(ii) For stainless steel drums and jerricans, conform to a minimum wall thickness as determined by the following equivalence formula:

FORMULA FOR METRIC UNITS

$$e_1 = \frac{21.4 \times e_0}{\sqrt[3]{Rm_1 \times A_1}}$$

FORMULA FOR U.S. STANDARD UNITS

$$e_1 = \frac{21.4 \times e_0}{\sqrt[3]{(Rm_1 \times A_1)/145}}$$

where: